ABSTRACT

A communication apparatus operating under a back scattering system involving processes of QPSK modulation is provided. The apparatus includes: a first signal channel for acquiring a first reflected wave by getting an incoming radio wave directly reflected without wave passage through any phase shifter; a second signal channel for acquiring a second reflected wave having a phase shifted by $\pi/2$ relative to the phase of the first reflected wave through two-way wave passage through a first phase shifter alone; a third signal channel for acquiring a third reflected wave having a phase shifted by π relative to the phase of the first reflected wave through two-way wave passage through the first and a second phase shifter; and a fourth signal channel for acquiring a fourth reflected wave having a phase shifted by $3\pi/2$ relative to the phase of the first reflected wave through two-way wave passage through the first through a third phase shifter.